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Notice of Allowability	Application No.	Applicant(s)	
	10/806,394	WATANABE ET AL.	
	Examiner	Art Unit	
	Eugene Yun	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to response filed 12/5/2007.
2. ☒ The allowed claim(s) is/are 1-13.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Liam Mcdowell on 1/18/2008.

The application has been amended as follows:

13. (Amended) A computer-readable medium encoded with a computer program for making a computer execute a radio-wave propagation characteristic forecasting method for performing ray launching for obtaining a passage time and an intensity when a structure having an edge, a transmission point, and a reception point are provided in an observation space defined in a three-dimensional space, a plurality of radio-wave rays is radiated from the transmission point at different angles, and the rays repeat reflection and transmission due to collision with the structure caused by their progress and pass the vicinity of the reception point while repeating the reflection and

transmission; comprising:

a ray spread defining step of defining a ray spread provided as a function of propagation distances from the transmission point to the rays;

a distance calculating step of calculating the distance between each of the rays and the edge;

a radius calculating step of obtaining a point on each of the rays and a point on the edge for determining the distance and calculating a ray spread radius to the distance from the point on each of the rays up to the transmission point; and

a diffracted-ray generating step of generating a plurality of diffracted rays by using the point on the edge as a diffraction point when the ray spread radius is equal to or larger than the distance between each of the rays and the edge.

Allowable Subject Matter

1. Claims 1-13 are allowed.

Regarding Claim 1, Fujii and Kouyoumjian do not teach, alone nor in combination, the combination of:

performing ray launching for obtaining a passage time and an intensity when a structure having an edge, a transmission point, and a reception point are provided in an observation space defined in a three-dimensional space comprising:

ray spread defining means for defining a ray spread provided as a function of propagation distances from the transmission point to the rays;

distance calculating means for calculating the distance between each of the rays and the edge;

radius calculating means for obtaining a point on each of the rays and a point on an edge for deciding the distance and calculating a ray spread radius to the distance from the point on each of the rays up to the transmission point; and

diffracted-ray generating means for generating a plurality of diffracted rays by using the point on the edge as a diffraction point when the ray spread radius is equal to or larger than the distance between each of the rays and the edge.


Claims 7 and 13 are allowable for similar reasons as claim 1.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eugene Yun whose telephone number is (571) 272-7860. The examiner can normally be reached on 9:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on (571)272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


MATTHEW ANDERSON
SUPERVISORY PATENT EXAMINER